

4-1966

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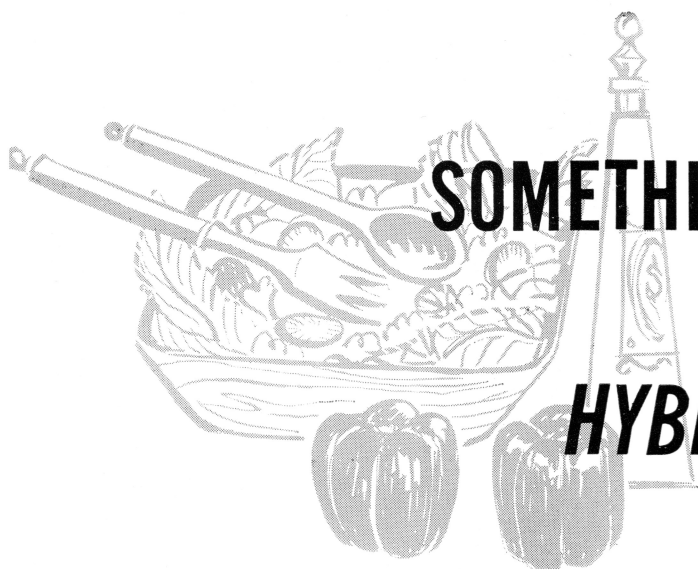
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Recommended Citation

Weigle, J. L. and Beck, A. R. (1966) "Something New for the Iowa Garden - Hybrid Green Peppers," *Iowa Farm Science*: Vol. 20 : No. 10 , Article 7.

Available at: <https://lib.dr.iastate.edu/farmscience/vol20/iss10/7>

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SOMETHING NEW FOR THE IOWA GARDEN... *HYBRID GREEN PEPPERS*

by J. L. Weigle and A. R. Beck

MANY IOWANS have raised peppers at one time or another in their home vegetable gardens. Housewives use the bell-shaped fruit in salads.

But peppers, in one form or another, have been an important part of seasoning, cooking and even medicine for hundreds of years. The red peppers of the United States and other temperate regions are eaten as a table vegetable and used as a condiment or medicine in either the green or ripe state.

Red peppers are known by different names, such as "chilies," or podpeppers; according to variety as pimento, Jamaica or Guinea peppers; and in the United States as sweet or bell peppers. These peppers were cultivated in South America prior to Columbus, who is said to have carried home specimens. Peppers were also known to Hippocrates for their medicinal properties and as heart and kidney stimulants.

Recently, new hybrids have been appearing on the market, while many of the older varieties have not been performing very well over the past years. Therefore, a yield trial was planted at Ames this past

season to test the newer varieties against the previously recommended varieties.

Our Study . . .

Four new hybrids were tested against several other varieties. Three of the new hybrids—Early Bountiful, Tokyo Bell and Peter Piper—performed well in the trial. Sunnybrook and California Wonder are standards and have been recommended for years. Delaware Belle, Penn Wonder, Spartan Emerald and Lincoln Bell are among the newer "bell-shaped" varieties adapted to midwest growing conditions.

Sunnybrook is an early pepper for the home garden with a wide, flat-shaped fruit, while California Wonder is bell-shaped and is generally quite late under central Iowa conditions.

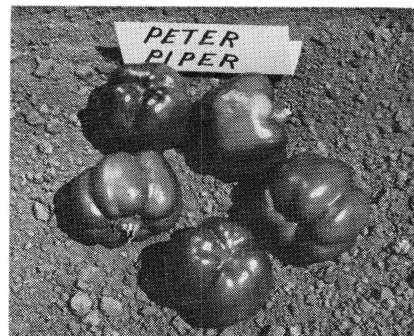
Early Bountiful and Tokyo Bell are somewhat shorter and a little more pointed than a typical California Wonder fruit. Peter Piper, on the other hand, is quite short and would be considered intermediate between the fruit types of Sunnybrook and California Wonder. Generally speaking, the plant habit of these hybrids is shorter than most of the varieties, making them more resistant to wind damage.

The seeds were started in flats

and the seedlings transplanted into peat pots in the greenhouse as soon as they were large enough to be handled. The seed of Tokyo Bell and Peter Piper did not germinate very well. This could be related to poor seed germination itself or to unsatisfactory growing conditions and will be investigated this coming season.

None of the plants grew very well in the greenhouse. As a result, the plants were not set into the field until the middle of June, which is well after the normal transplanting date for this area. The plants were spaced one foot apart in the row with three feet between rows. This distance between rows was used in the trial plot so it could be cultivated mechanically. A closer spacing between rows could be used in the home garden without affecting the results in any way.

There was a long dry period at



Peter Piper is one of the new hybrid peppers tested in ISU yield trials. The hybrid variety, Tokyo Bell, was the top producer in the tests.

Pepper trials, Ames, 1965.

| Variety | Yield: Lbs. per 10 plants | | Avg. fruit wt. in oz. | Wall thickness in inches |
|-------------------|---------------------------|-------|--------------------------|-----------------------------|
| | 1st picking | Total | | |
| Early Bountiful | 4.1 | 11.3 | 4.2 | 0.187 |
| Tokyo Bell | 3.2 | 16.0 | 4.1 | 0.192 |
| Peter Piper | 4.7 | 10.3 | 3.4 | 0.187 |
| Delaware Belle | 1.5 | 6.1 | 5.1 | 0.251 |
| Sunnybrook | 2.6 | 4.9 | 3.1 | 0.226 |
| Penn Wonder | 1.0 | 10.4 | 5.4 | 0.236 |
| Spartan Emerald | 0.2 | 2.6 | 5.7 | 0.266 |
| Lincoln Bell | 0.0 | 5.7 | 5.1 | 0.217 |
| California Wonder | 0.4 | 2.1 | 5.8 | 0.241 |

Ames during the middle of the summer last year. For this reason, the peppers were irrigated several times to maintain fruit quality and high yields. Approximately one inch of water was applied at 10-day intervals with an oscillating-type lawn sprinkler during the dry period.

The peppers were harvested on August 9, August 24 and September 10. The results of these harvests are shown in the accompanying table. The yields shown are for a 10-plant plot. The other columns give an idea of fruit size and quality. The column, "first picking," gives an indication of early yield. The yields listed under "total" include all three harvests. The other columns give an idea of fruit size and quality.

Fruits were produced by some varieties after the September 10 picking. This fact coupled with the late transplanting tended to be a disadvantage for late varieties in the yield comparisons shown in the table. Our primary interest, however, was in testing for early yield so Iowans can have the chance to enjoy home grown peppers before the summer is over.

In Summary . . .

Although these new hybrids have been tested only one year and recommendations cannot be made on this basis, it is apparent that they are worthy of further testing and limited trial by growers and

home gardeners. The early yield of the hybrids was better than Sunnybrook which had been considered the best of the early ones for Iowa. At least one of them, Tokyo Bell, apparently yields well throughout the season. Although fruit size, fruit wall thickness and fruit shape uniformity are not quite as good for the hybrids as for the other varieties, it is generally necessary to sacrifice a few points in order to obtain a high early yield of fruit.

It would appear that, at least, the hybrid Tokyo Bell may become important in Iowa. Penn Wonder, Delaware Belle, and Lincoln Bell are probably still the best adapted of the standard varieties to central Iowa conditions. Plans have been made for a pepper trial at Ames on a yearly basis.



Penn Wonder is one of the newer bell-shaped pepper varieties suitable for mid-west growing conditions.